(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 3 February 2005 (03.02.2005)

(10) International Publication Number WO 2005/009439 A1

(51) International Patent Classification7: C07D 451/02

A61K 31/46,

(21) International Application Number:

PCT/US2004/022947

(22) International Filing Date: (25) Filing Language:

English

16 July 2004 (16.07.2004)

(26) Publication Language:

English

(30) Priority Data: 60/487,981

17 July 2003 (17.07.2003) US

- (71) Applicant (for all designated States except US): GLAXO GROUP LIMITED [GB/GB]; Glaxo Wellcome House, Greenford, Middlesex UB6 0NN (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): BELMONTE, Kristen, E. [US/US]; 709 Swedeland Road, King of Prussia, PA 19406 (US). BUSCH-PETERSEN, Jakob [DK/US]; 709 Swedeland Road, King of Prussia, PA 19406 (US). LAINE, Dramane [FR/US]; 709 Swedeland Road, King of Prussia, PA 19406 (US). PALOVICH, Michael, R. [US/US]; 709
- Dramane [PR/US]; 709 Swedeland Road, King of Prussia, PA 19406 (US).

 PA 19406 (US). PALOVICH, Michael, R. [US/US]; 709 Swedeland Road, King of Prussia, PA 19406 (US).

 (74) Agents: SIMON, Soma, G. et al.; GlaxoSmithKline, Corporate Intellectual Property, UW 2220, 709 Swedeland Road, P.O. Box 1539, King of Prussia, PA 19406-0939 (US).

 (US).

 (54) Title: MUSCARINIC ACETYLCHOLINE RECEPTOR ANTAGONISTS

 (57) Abstract: Muscarinic Acetylcholine Receptor Antagonists and methods of using them are provided.

- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE. KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.